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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,923	12/03/2001	Isabelle Conesa	110652	3020
7590		11/15/2006	EXAMINER	
Oliff & Berridge		GRAY, JILL M		
P O Box 19928		ART UNIT		
Alexandria, VA 22320		PAPER NUMBER		

1774

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/936,923	<b>Applicant(s)</b> CONESA ET AL.	
	<b>Examiner</b> Jill M. Gray	<b>Art Unit</b> 1774	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 7-24 and 27-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. More specifically, claim 6 contains duplicate limitation as set forth in parent claim 1.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-6 and 26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a proportion of plasticizer that is 100 parts by weight up to 200% with respect to the weight of the acrylic resin, does not reasonably provide enablement for any amounts of plasticizer that is less than 100 parts by weight. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. In particular, the disclosure on page 11 of the specification discloses that the final rheological behavior depends largely on the plasticizer used and more specifically on its chemical nature and its proportion. Accordingly, the proportion of plasticizer used appears to be critical to the instant claimed rheological properties. Present claim 1 does not specify any proportion of plasticizer and there is no clear

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evidence on this record that an amount of plasticizer as low as 50% or 5% would not result in the instant claimed critical rheological behavior. Accordingly, the specification is not commensurate in scope with the claims.

Applicants' arguments have been noted. However, as set forth above, the specification discloses that the proportion of the plasticizer used is critical to the instant claimed rheological properties of exhibiting at low shear rates, Newtonian rheological behavior with a viscosity of less than 6000 mPa.s and at high shear rates, pseudoplastic rheological behavior. A plastisol can be obtained with amounts of plasticizer that are as low as 10%, and there is no evidence on this record that the incorporation of a plasticizer in an amount as low as 10% would function as intended by applicants.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-6 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent abstract JP8100098 (Shinko) in view of applicants' disclosure on page 3, lines 3-7.

Shinko teaches in the abstract an organoplastisol composition comprising an acrylic resin blended with a phosphate (per claim 3), wherein said organoplastisol has high flame resistance. While Shinko teaches that the phosphate is a phosphoric acid he does not specifically teach the incorporation of an intumescent agent.

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Applicants' disclosure on page 3, lines 3-7 of the specification, discloses that "it is known to incorporate into any plastic composition a suitable intumescent agent, formulated with the resin".

It would have been obvious at the time the invention was made to modify the organoplastisol taught by Shinko by incorporating a intumescent agent as known in the art, and with the reasonable expectation of success of obtaining a composition having enhanced flame retardancy.

As to the proportions of the intumescent agent and plasticizer, it is the position of the examiner that since the result sought, a plastisol comprising an acrylic resin and an intumescent agent having high flame resistance, and the ingredients used were known, e.g. acrylic resin, phosphate and intumescent agent, it was within the expected skill of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients and any improved results alleged by applicants would have resulted from experimentation of an obvious nature.

As to the limitation that the composition is in the plastisol state and exhibits at low shear rates, Newtonian rheological behavior with a viscosity of less than 6000 mPa.s and at high shear rates, pseudoplastic rheological behavior, Shinko teaches that his composition is in the plastisol state and the inclusion of phosphate. Accordingly, the examiner has reason to believe that the composition of Shinko exhibits the claimed critical rheological behavior, in the absence of factual evidence to the contrary.

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Therefore, the combined teachings of Shinko and applicants' disclosure on page 3, and lines 3-7 would have rendered obvious the invention as claimed in present claims 1-3, 5-6 and 25-26.

4. Claims 1-6 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitazawa et al, 5,444,110 (Kitazawa) in view of applicants' disclosure on page 3, lines 3-7 of the specification and Kelly 5,942,330, cited to show the state of the art.

Kitazawa teaches a composition in the plastisol state comprising an acrylic resin and an intumescent agent and a plasticizing medium of the type contemplated by applicants. See column 3, lines 15-35. In addition, Kitazawa teaches that the plasticizer can be an organic phosphate (per claim 3) or comprises a phthalate (per claim 4), and teaches that the plasticizer is present in amount ranging from 10 to 500 parts by weight, as required by claims 2, 5 and 25. See column 6, line 16 through column 7, and line 29. Kitazawa teaches that a flame retardant can be present wherein the flame retardant can be zinc borate. See column 8, lines 18-19 and 40-42. Note also, Kelly, column 10, lines 9-11, which teaches that zinc borate is an intumescent filler. Applicants' disclosure on page 3, lines 3-7 of the specification, discloses that "it is known to incorporate into any plastic composition a suitable intumescent agent, formulated with the resin". Accordingly, it would have been obvious to form a plastic composition of the type contemplated by applicants, said composition being in the plastisol state and comprising an acrylic resin, an intumescent agent and a plasticizing medium. Kitazawa is silent as to the weight proportion of the intumescent agent.

As to the proportion of the intumescent agent in claims 1, 2, 6 and 26, it is the position of the examiner that since the result sought, a plastisol comprising an acrylic resin and an intumescent agent having fire retardant properties, and the ingredients used were known, e.g. acrylic resin, phthalate or phosphate plasticizing medium and intumescent agent, it was within the expected skill of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients and any improved results alleged by applicants would have resulted from experimentation of an obvious nature.

As to the limitation that the composition is in the plastisol state and exhibits at low shear rates, Newtonian rheological behavior with a viscosity of less than 6000 mPa.s and at high shear rates, pseudoplastic rheological behavior, Kitazawa teaches that his composition is in the plastisol state and that it contains acrylic resin, plasticizing medium in amounts contemplated by applicants and an intumescent agent. Accordingly, the examiner has reason to believe that the composition of Kitazawa exhibits the claimed critical rheological behavior, in the absence of factual evidence to the contrary.

Therefore, the combined teachings of Kitazawa, applicants' disclosure on page 3, lines 3-7 of the specification and Kelly would have rendered obvious the invention as claimed in present claims 1-6 and 25-26.

5. Claims 1-6 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain Publication 1,516,510 (Teroson) in view of applicants' disclosure on page 3, lines 3-7 of the specification).

Teroson teaches a composition in the plastisol state comprising an acrylic resin and a plasticizing medium of the type contemplated by applicants. The plasticizer can

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be a phthalate or a phosphate and is present in an amount ranging from 65 to 800 parts by weight of plasticizer per 100 parts by weight of polymer, as required by claims 1-5 and 25. See page 1, line 5; page 2, lines 59-60, and page 3, lines 32-35. Teroson teaches that other filler and additives can be included in amounts of up to 700, but does not specifically teach the inclusion of an intumescent agent.

Applicants' disclosure on page 3, lines 3-7 of the specification, discloses that "it is known to incorporate into any plastic composition a suitable intumescent agent, formulated with the resin".

It would have been obvious at the time the invention was made to modify the teachings of Teroson by incorporating an intumescent agent as known in the art, per applicants' disclosure on page 3, lines 3-7, of the specification.

As to the proportion of the intumescent agent in claims 1, 2, 6 and 26, it is the position of the examiner that since the result sought, a plastisol comprising an acrylic resin and an intumescent agent having fire retardant properties, and the ingredients used were known, e.g. acrylic resin, phthalate or phosphate plasticizing medium and up to 700 parts by weight of additional fillers, it was within the expected skill of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients and any improved results alleged by applicants would have resulted from experimentation of an obvious nature.

As to the limitation that the composition is in the plastisol state and exhibits at low shear rates, Newtonian rheological behavior with a viscosity of less than 6000 mPa.s and at high shear rates, pseudoplastic rheological behavior, Teroson teaches that his



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composition is in the plastisol state and that it contains acrylic resin, plasticizing medium in amounts contemplated by applicants and an intumescent agent. Accordingly, the examiner has reason to believe that the composition of Teroson exhibits the claimed critical rheological behavior, in the absence of factual evidence to the contrary.

Therefore, the combined teachings of Teroson and applicants' disclosure on page 3, lines 3-7 of the specification would have rendered obvious the invention as claimed in present claims 1-6 and 25-26.

### ***Conclusion***

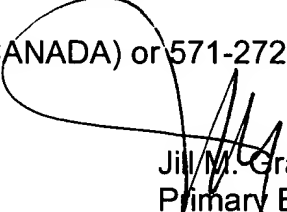
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jill M. Gray  
Primary Examiner  
Art Unit 1774

jmg